Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended)   A system for analyzing real-time operation of a ~~communication device~~modem, the system comprising:

a ~~communication device~~modem comprising a recording module, wherein the recording module causes the recording of input information that is input to the ~~communication device~~modem during real-time operation of the ~~communication device~~modem; and

a playback device comprising a model of the ~~communication device~~modem that the playback device executes according to the recorded input information.

2. (Original)   The system of claim 1, further comprising a debugging module that provides for controlling and observing the operation of the playback device.

3. (Currently amended)   The system of claim 1, wherein the playback device is communicatively coupled to the ~~communication device~~modem and the recording module causes the input information to be sent to the playback device during real-time operation of the ~~communication device~~ modem.

4. (Currently amended)   The system of claim 1, further comprising a computer communicatively coupled to the ~~communication device~~ modem, wherein the recording module causes the recording of the input information to a memory device of the computer.

5. (Currently amended)   The system of claim 1, wherein the input information comprises input data and input commands <u>received</u> from a computer <u>that is communicatively coupled to the modem</u>, and input information from a device other than the computer<u>, which is communicatively coupled to the modem</u>.

6. (Currently amended)   The system of claim 1, wherein the model of the ~~communication device~~ modem ~~is~~ <u>comprises</u> a bit-exact software model.

7. (Currently amended)   The system of claim 1, wherein the ~~model of the communication playback~~ device comprises ~~a device~~hardware modeling components ~~substantially similar to at least a portion~~ of the ~~communication device~~modem.

8. (Currently amended)   The system of claim 1, further comprising a networked computer coupled to the ~~communication device~~modem over a computer network, and wherein the recording module causes the ~~communication device~~modem to send the input information to the networked computer.

9. (Currently amended)   A ~~communication device~~modem comprising:

a first input that receives information from a first device;

a second input that receives information from a second device ~~that~~with which the first device is communicating ~~with~~using the ~~modem~~communication device; and

a recording module communicatively coupled to the first input and the second input that causes input information arriving at one or both of the first input and the second input during real-time operation of the modem ~~communication device~~ to be recorded for subsequent non-real-time analysis.

10. (Currently amended) The modem ~~communication device~~ of claim 9, further comprising a command input that receives modem control commands ~~information~~ from the first device, and wherein the recording module further causes modem control commands ~~information~~ arriving at the command input during real-time operation of the modem ~~communication device~~ to be recorded for subsequent non-real-time analysis.

11. (Currently amended) The modem ~~communication device~~ of claim 9, wherein the first device is a computer system, and wherein the recording module causes the input information arriving at ~~one or both of~~ the first input and the second input during real-time operation of the modem ~~communication device~~ to be recorded on a memory device of the computer system.

12. (Currently amended) The modem ~~communication device~~ of claim 9, wherein the recording module causes ~~the~~ input information arriving at ~~one of both of~~ the first input and the second input to be communicated to a networked computer communicatively coupled to the modem

7

~~communication device~~ over a communication network and recorded on a memory device of the networked computer.

13. (Currently amended) The modem ~~communication device~~ of claim 9, wherein the modem ~~communication device~~ comprises an ADSL modem~~comprises a computer communication device~~.

14. (Currently amended) A real-time operating environment for a modem~~communication device~~, the real-time operating environment comprising:

a memory device; and

a modem ~~communication device~~ communicatively coupled to the memory device, the modem ~~communication device~~ comprising:

a first input that receives information from a first device;

a second input that receives information from a second device ~~that~~ with which the first device is communicating ~~with~~ using the modem~~communication device~~; and

a recording module communicatively coupled to the first input, the second input and the memory device that causes information received at one or ~~more~~ both of the first input and the second input to be stored in the memory device for subsequent non-real-time analysis.

15. (Currently amended) The real-time operating environment of claim 14, wherein the ~~communication device~~modem further comprises a command input that receives modem control commands ~~information~~ from the first device, and wherein the recording module further causes modem control commands ~~information~~ received at the command input during real-time operation of the modem to be stored in the memory device for subsequent non-real-time analysis.

16. (Original) The real-time operating environment of claim 14, wherein the first device comprises the memory device.

17. (Currently amended) The real-time operating environment of claim 14, further comprising a networked computer communicatively coupled to the modem~~communication device~~, and

wherein the networked computer comprises the memory device.

18. (Currently amended) The real-time operating environment of claim 14, wherein the ~~modem communication device is~~comprises ~~a computer communication device~~an ADSL modem.

19. (Currently amended) A non-real-time playback environment for analyzing real-time performance of a ~~communication device~~modem, the environment comprising:

a memory ~~having~~ comprising input information that was obtained from a modem ~~communication device~~ during real-time operation of the modem~~communication device~~; and

a playback module communicatively coupled to the memory, the playback module comprising a model of the modem ~~communication device~~ that the playback module executes according to the input information in the memory ~~module~~.

20. (Currently amended) The non-real-time playback environment of claim 19, wherein the input information comprises:

information from a computer coupled to the modem~~communication device~~; and

information from a device ~~that~~ with which the computer is communicating ~~with~~ using the modem~~communication device~~.

21. (Currently amended) The non-real-time playback environment of claim 19, wherein the input information comprises data and modem control commands ~~information~~ sent from a computer to the modem~~communication device~~.

22. (Original) The non-real-time playback environment of claim 19, further comprising a debugging module communicatively coupled to the playback module that provides for controlling and observing the operation of the playback module.

23. (Currently amended) The non-real-time playback environment of claim 19, wherein the model of the modem ~~communication device is~~ comprises a bit-exact software model of the modem~~communication device~~.

24. (Currently amended) The non-real-time playback environment of claim 19, further

comprising a computer communicatively coupled to the modem~~communication device~~, and wherein the memory is a memory device of the computer.

25. (Original) The non-real-time playback environment of claim 24, wherein the computer comprises the playback module.

26. (Original) The non-real-time playback environment of claim 19, further comprising a networked computer communicatively coupled to the modem ~~communication device~~ over a computer network, and wherein the networked computer comprises the memory.

27. (Currently amended) A method for analyzing real-time operation of a ~~communication device~~modem, the method comprising:

operating the modem ~~communication device~~ in real-time, the modem~~communication device~~ comprising a recording module;

utilizing the recording module to cause the recording of input information input to the modem ~~communication device~~ during real-time operation of the modem~~communication device~~; and

executing a model of the modem~~communication device~~, where~~in~~ the model is responsive to the recorded input information.

28. (Currently amended) The method of claim 27, wherein utilizing the recording module comprises utilizing the recording module to cause the recording of the input information to a memory device of a computer that is connected to the modem~~communication device~~.

29. (Currently amended) The method of claim 27, wherein:

operating the modem ~~communication device~~ comprises running the modem ~~communication device~~ as a ~~Windows~~an operating system device driver on a computer that is utilizing the modem~~communication device~~; and

utilizing the recording module comprises utilizing the recording module to cause the recording of the input information to a memory device of the computer.

30. (Currently amended) The method of claim 27, wherein utilizing the recording module

comprises utilizing the recording module to cause the recording of the input information to a memory device of a computer that is communicatively coupled to the modem ~~communication device~~ through a communication network.

31. (Currently amended) The method of claim 30, wherein utilizing the recording module ~~further~~ comprises executing a recording application program on the computer.

32. (Original) The method of claim 27, wherein utilizing the recording module comprises utilizing the recording module to cause the recording of input data and input commands from a computer and input samples from a communication medium.

33. (Currently amended) The method of claim 27, further comprising reading the recorded input information into a software model of the modem~~communication device~~.

34. (Currently amended) The method of claim 27, wherein the model ~~is~~ comprises a bit-exact software model of the modem~~communication device~~.

35. (Currently amended) The method of claim 27, further comprising debugging operation of the modem by, at least in part, observing execution of the model on the recorded input information.

36. (Original) The method of claim 35, wherein observing execution of the model comprises executing a debugging tool communicatively coupled to the model.

37. (Currently amended) The method of claim 27, further comprising debugging operation of the modem by, at least in part, observing execution of the model with the recorded input information in non-real-time.

38. (Currently amended) The method of claim 27, wherein the modem ~~communication device comprises a~~ comprises an ADSL modem ~~computer communication device~~.

11